

Academic Programs

UNDERGRADUATE: Students can earn either a Bachelor of Arts or Bachelor of Science in Geography. The undergraduate program provides a broad liberal arts education in physical, human and regional geography, complemented by courses that provide students with a foundation in Geographic Information Science (GIS, remote sensing and cartography), research methods, writing skills and statistics. The program prepares students for positions in government and industry, and also for graduate work in geography or related fields.



GRADUATE: Graduate students can pursue either an MA or PhD in Geography. Students have considerable flexibility in designing programs tailored to their individual interests and career goals. Particularly strong programs exist in: (1) *Geographic Information Science*, capitalizing on the strengths and facilities of the Center for Advanced Land Management Information Technologies (CALMIT); (2) *Historical and Human Geography*, focusing on historical settlement, land use, environmental perception, Native American studies, Great Plains studies, population and settlement patterns, and political behavior; (3) *Natural Resources*, where graduate students can pursue interdisciplinary studies in conservation biology, water resources, natural hazards, climatology and related areas in conjunction with faculty of the School of Natural Resources; and (4) *Community and Regional Planning*, a cross-disciplinary PhD combining strengths of the Faculty of Geography and the UNL Community and Regional Planning Program.

Faculty of Geography and GIScience

Faculty:

Douglas M. Amedeo, PhD, Iowa, 1967, Professor—spatial theory, environment and behavior, diffusion
J. Clark Archer, PhD, Iowa, 1974, Professor—political, settlement, computer cartography, GIS
Rebecca A. Buller, PhD, Nebraska, 2009, Lecturer—historical and cultural geography, historical geography of the Great Plains, women's and gender studies
Kenneth Dewey, PhD, Toronto, 1973, Professor—climate, severe weather
Anatoly Gitelson, PhD, IRT Russia, 1972, Professor—remote sensing
Qingfeng (Gene) Guan, PhD, University of California-Santa Barbara, 2008, Assistant Professor—geographic information systems, environmental modeling
Paul R. Hanson, PhD, Nebraska, 2005, Associate Professor—geomorphology, physical geography of the Great Plains
R. M. (Matt) Joeckel, PhD, Iowa, 1993, Professor—surficial processes, soils and weathering, the Great Plains
Cody Knutson, PhD, Nebraska, 2004, Research Assistant Professor—water resources and drought, risk management
Merlin P. Lawson, PhD, Clark, 1973, Professor Emeritus—climate change, remote sensing
Richard E. Lonsdale, PhD, Syracuse, 1960, Professor Emeritus—marginal lands, regional development
James W. Merchant, PhD, Kansas, 1984, Professor and Chair—remote sensing, geographic information systems (GIS), land use
Sunil Narumalani, PhD, South Carolina, 1993, Professor—GIS, remote sensing, environmental studies
Katherine Nashleaneas, PhD, Nebraska, 2005, Lecturer—human geography, ethnic studies, Africa, human dimensions of natural resources
Juan Paulo Ramirez, PhD, Nebraska, 2003, Lecturer—Latin America, GIS, design of surveys, statistical analysis
Donald C. Rundquist, PhD, Nebraska, 1977, Professor—remote sensing, geographic information systems (GIS)
Robert H. Stoddard, PhD, Iowa, 1966, Professor Emeritus—human/social, field techniques, South Asia
Brian D. Wardlow, PhD, Kansas, 2005, Research Assistant Professor—remote sensing, GIS, drought, land use/land cover
Donald A. Wilhite, PhD, Nebraska, 1977, Professor and SNR Director—climate, drought, human dimensions
David J. Wishart, PhD, Nebraska, 1971, Professor and Chief Undergraduate Advisor—historical, indigenous peoples, Great Plains
Arthur I. Zygielbaum, PhD, Nebraska, 2009, Adjunct Associate Professor—remote sensing

Affiliated Faculty:

Rodrigo F. Cantarero, PhD, Southern California, 1988, Associate Professor, Community and Regional Planning—planning, GIS
Ge Lin, Ph.D. SUNY Buffalo, 1996, Associate Professor, University of Nebraska Medical Center-GIS, health geography
Yunwoo Nam, PhD, Pennsylvania, 2004, Assistant Professor, Community and Regional Planning—GIS and analytic methods in planning
Gordon Scholz, MBA, Nebraska-Omaha, 1974, Professor, Community and Regional Planning—land development, planning
Zhenghong Tang, PhD, Texas A&M, 2007, Assistant Professor, Community and Regional Planning—GIS and risk analysis

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School of Natural Resources

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Geography

School of Natural Resources
University of Nebraska-Lincoln



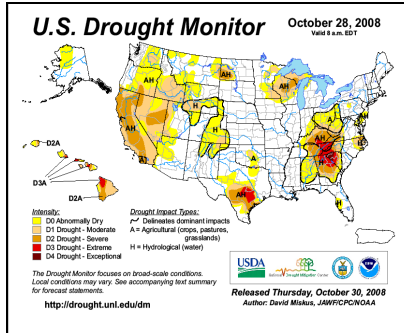
Photograph courtesy of Michael Forsberg, UNL Geography 1989
<http://www.michaelforsberg.com>

Geographers study the spatial dimensions of human societies and earth's environment. Geography is a discipline that offers unique insights about past, present and future issues involving natural resources, culture, economics and politics. For more than a century, the University of Nebraska-Lincoln, has been internationally recognized as a center-of-excellence in geographic education and research .

<http://snr.unl.edu/geographygis/>

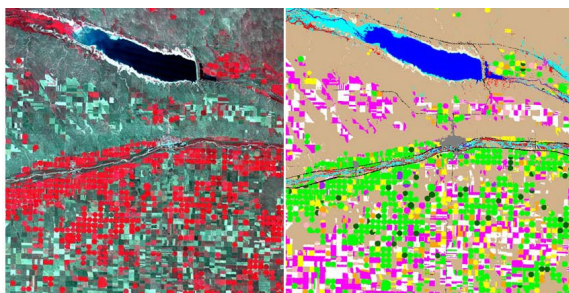
Overview

Geography is a unit of the **University of Nebraska-Lincoln (UNL) School of Natural Resources (SNR)**. The School is a unique cross-campus, multidisciplinary enterprise that includes faculty from both the UNL College of Arts & Sciences and the Institute of Agriculture and Natural Resources. Geography faculty and students are affiliated with several SNR research centers including the Center for Advanced Land Management Information Technologies (CALMIT), the National Drought Mitigation Center (NDMC) and the High Plains Regional Climate Center.



Geographers in the NDMC study the human and biophysical impacts of drought.

Faculty and students in Geography also regularly collaborate with many other academic departments and research centers including UNL's Center for Great Plains Studies, the Center for Digital Research in the Humanities, the Community and Regional Planning Program, the Department of Agronomy and Horticulture, the Department of Geosciences and the University of Nebraska Medical Center.



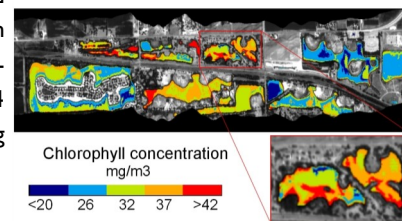
Geographers at CALMIT used Landsat Thematic Mapper imagery of western Nebraska (left) to map land cover (right) via image classification.

Facilities

Geography faculty and student offices are located in Hardin Hall, a modern research and classroom facility that also houses other units of the School of Natural Resources. The facility includes specialized laboratories and several nationally-recognized research centers including CALMIT, the High Plains Regional Climate Center, the National Drought Mitigation Center and the UNL Water Center. All Geography students and faculty are provided access to state-of-the-art computing including image processing and GIS software such as ArcGIS, ERDAS Imagine and ENVI.



Through CALMIT, UNL geographers have access to a 29-hectare field research station at UNL's Agricultural Research and Development Center near Ithaca, NE; unique close-range remote sensing capabilities, including platforms to deploy sensor packages that operate from the UV through the microwave spectral bands over a variety of land and water environments; and an aircraft for support of remote sensing research, outfitted with instruments that include a thermal-infrared camera and an AISA Eagle hyperspectral (244 band) imaging system.

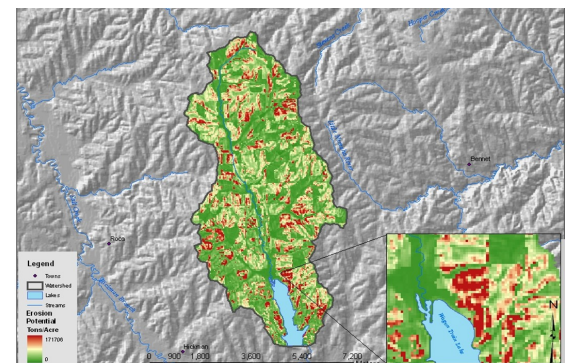
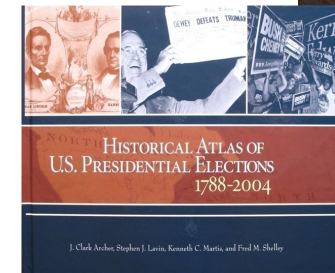
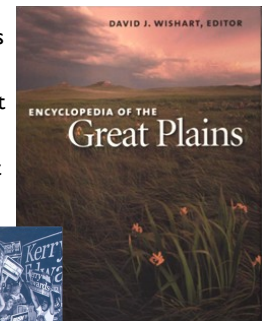
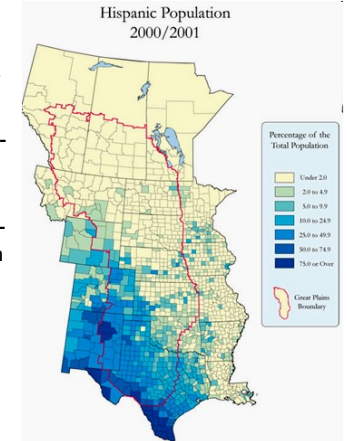


UNL geographers used hyperspectral imagery to map chlorophyll concentrations in lakes near Fremont, NE.

Research

Some of the areas in which UNL geographers have recently focused research include:

- Political geography of U.S. elections
- Human and historical geography of the Great Plains
- Environmental perception and human behavior
- Map communication and design
- Remote sensing of land and water resources
- GIS-based spatial modeling of natural hazards
- Land use
- Drought impact assessment
- Climate change
- Surficial processes in Great Plains landscapes



Modeled soil erosion, Wagon Train watershed, NE